

1/2 024 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--FREE RADICALS AND ENERGY EXCHANGE IN LEUKOCYTES DURING LEUKOSES -U-
AUTHOR--KLOCHKO, E., KOVALCHUK, L., KRUGLYAKOVA, X., SEITS, I., LUGANOVA,
I.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKADE. NAUK SSSR 1970, 190(2), 476-9
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--LEUKOCYTE, EPR SPECTRUM, RESPIRATION, PHOSPHORYLATION, FREE
RADICAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1985/1800 STEP NO--UR/0020/70/190/002/0476/0479
CIRC ACCESSION NO--AT0101847
UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AT0101847

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CHANGES IN CONCN. OF FREE RADICALS WERE FOLLOWED BY EPR SPECTRA IN HUMAN LEUKOCYTES DURING LEUKOSIS. AN INCREASED CONCN. OF FREE RADICALS IN LEUKOSIS WAS CONNECTED WITH A DISTURBED SYSTEM OF COUPLING BETWEEN RESPIRATION AND PHOSPHORYLATION REACTIONS.

UNCLASSIFIED

Acc. Nr: **AP0044383**

Ref. Code: UR 0463

PRIMARY SOURCE: Molekulyarnaya Biologiya, 1970, Vol 4, Nr 1,
pp 3-8

KINETIC CHARACTERISTICS OF CHEMILUMINESCENCE APPEARING
IN REACTION OF DNA WITH *N*-ACETYLETHYLENIMINE
Zybina, D. L.; Volokitina, K. S.; Kruglyakova, K. Ye.;
Emanuel', N. M.
Institute of Chemical Physics, Academy of Sciences, USSR, Moscow

Chemiluminescence was revealed in the course of reaction of DNA with *N*-acetyl-ethyleneimine. Kinetic curve for the chemiluminescence indicated that intermediate products did appear in the system. The dependence was found of the intensity and the rate constant of chemiluminescence upon the concentrations of reagents and temperature. The chemiluminescence was shown to be due to oxidation processes. The decrease in the chemiluminescence intensities under the action of free-radical reaction inhibitors made it possible to suggest the radical nature of the chemiluminescence occurring in the course of the reaction between DNA and *N*-acetyleneimine.

REEL/FRA
19770999

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Pathology

USSR

UDC: 577.3

KLOCHKO, E.V., KOVAL'CHUK, L.V., KRUGLYAKOVA, K.YE., SEYTS, I.P., LUGANOVA, I. S., BLINOV, M.N., and EMANUEL', N.M., Academician, Institute of Chemical Physics, Academy of Sciences USSR

"Free Radicals and Metabolism in Leukocytes During Leukoses"

Moscow, Doklady Akademii Nauk, Vol 190, No 2, 1970, pp 476-479

Abstract: The content of free radicals in leukocytes from chronic lymphatic leukemia and chronic myeloid leukemia patients was studied after the cells were incubated with various metabolic poisons - monobromacetate, sodium fluoride, 2,4-dinitrophenol, and oligomycin. The concentration of free radicals decreased by 50% after "leukemic" leukocytes were exposed to 2,4-dinitrophenol, an uncoupler of oxidative phosphorylation in the early stages. The use of oligomycin, an uncoupler of oxidative phosphorylation in the later stages, did not have an appreciable effect on the level of free radicals. The incubation of healthy leukocytes with 2,4-dinitrophenol or oligomycin likewise had no effect on the concentration of free radicals. The level of free radicals in the leukocytes of both leukotic patients and healthy persons was not affected either during inhibition of glycolysis with sodium fluoride or stimulation during anaerobiosis. Monobromacetate, which blocks glycolysis, had a more pronounced effect. It would appear that the high content of free radicals in leukocytes during leukemia signifies a disturbance of oxidative phosphorylation.

1/1

USSR

UDC 678.01:620.17:627.039

SERGEYEV, V. I., DEYEV, Yu. S., ~~KRUGLYY, M. S.~~, and
SIRENKOV, V. I., Scientific Research Institute of Plastics,
Moscow

"A Test Unit of Polymers by Irradiation Effect"

Kiev, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 8,
No 1, 1972, pp 87—89

Abstract: The construction and operation of a test unit for polymers is described by reference to its schematic drawing. The unit is designed for carrying out tensile and creep tests and studying the stress relaxation by tension of polymers under vacuum and ionizing irradiation conditions in a wide temperature interval. The unit is mounted on the base of a linear electron accelerator with 5 Mev energy of accelerated electrons and their 50 μ A average and 75 mA pulse current. Some preliminary investi-

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USSR

SERGEYEV, V. I., et al., Fiziko-Khimicheskaya Mekhanika Materialov, Vol. 8, No 1, 1972, pp 87-89

gation results, stress relaxation curves, of mechanical properties of polytetrafluoroethylene subjected to the action of fast electrons show that the relaxation of mechanical properties proceeding in polytetrafluoroethylene is considerably intensified by irradiation and, therefore, an increase of the creeping rate can be anticipated. Two illustr., eight biblio. refs.

2/2

- 175 -

TITLE—CALCULATION OF THE INTENSITY OF INFECTION WITH TICK BORNE
ENCEPHALITIS IN THE POPULATION OF ZABAISKALIE —U—
AUTHOR—(05)—GORIN, G.Z., LVOV, D.K., VASENIN, A.A., BOLSHEV, L.N.,
KRUZHIC, YU. I.
COUNTRY OF INFO—USSR

SOURCE—MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL
39, NR 3, PP 259-263
DATE PUBLISHED—70

SUBJECT AREAS—BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS—ENCEPHALITIS, TICK, SEROLOGIC TEST, HEMAGGLUTINATION
INHIBITION TEST

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FRAE—2000/0222

STEP NO—UR/0358/70/039/003/0259/0263

CIRC ACCESSION NO—AP0123986

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123986

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. ON THE BASIS OF PREVIOUSLY PUBLISHED METHODS BY THE AUTHORS CALCULATION OF THE INTENSITY OF INFECTION RATE OF THE POPULATION WITH TICK BORNE ENCEPHALITIS IN THE ZABAICALIE WAS MADE, AS WELL AS CALCULATION OF THE INFECTION RATE OF TICKS WITH THE VIRUS (9-13PERCENT). THE ANALYSIS WAS BASED ON THE DATA OF SEROLOGICAL EXAMINATION OF 6420 PERSONS BY THE HI TEST, AS WELL AS ON THE DATA OF QUESTIONING OF 26,781 SUBJECTS WITH REGARD TO TICK EXPOSURE AND ATTACK DURING THE EPIDEMIC SEASON. SPECIMENS WERE COLLECTED IN 1966-1968 IN THE CHITA REGION AND THE BURYAT ASSR. ACCORDING TO INTENSITY OF INFECTION, IT WAS FOUND POSSIBLE TO COMBINE TERRITORIES SITUATED IN DIFFERENT PHYSICO GEOGRAPHICAL AND LANDSCAPE CONDITIONS INTO 2 MAIN LANDSCAPE EPIDEMIOLOGICAL AREAS. ONE OF THEM IS DISTINGUISHED BY AN EXTREMELY LOW INTENSITY OF INFECTION (0.4-0.9PERCENT) AND INCLUDES CENTRAL ASIAN AND THE PRISELENGINSKAYA STEPPE AND NORTH ZABAICAL MOUNTAIN TAIGA. THE OTHER AREA HAS HIGHER INTENSITY OF INFECTION (2-2.1PERCENT) AND INCLUDES TERRITORIES WITHIN THE DAURSKAYA MOUNTAIN TAIGA AND SUBTAIGA AS WELL AS THE PRIBAIKAL AND SOUTH ZABAICAL TAIGA AND SUBTAIGA. FACILITY: IRKUTSKIY INSTITUT EPIDEMIOLOGII I MIKROBIOLOGII, MZ RSFSR. FACILITY: INSTITUT VIRUSOLOGII IM D. I. IVANOVSKOGO, AMN SSSR. FACILITY: MOSKVA MATEMATICHESKIY INSTITUT IM. V. A. STEKLOVA, AN SSSR. FACILITY: MOSKVA REPUBLIKANSKAYA SANEPIIDSTANTSIIYA, BURYATSKOY ASSR, ULAN-UDE.

UNCLASSIFIED

1/2 030 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--INTERMEDIATE STEAM SUPERHEATER OF A GAS MAZUT STEAM GENERATOR
STUDIED DURING THE COMBUSTION OF NATURAL GAS AND SULFUR MAZUT -U-
AUTHOR--KRUK, M.I.

COUNTRY OF INFO--USSR

SOURCE--TEPLOENERGETIKA 1970, 17(3), 34-6

DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, PHYSICS

TOPIC TAGS--STEAM SUPERHEATER, THERMODYNAMIC EFFICIENCY, NATURAL GAS, FUEL
COMPOSITION, AIR FLOW, TEMPERATURE CHARACTERISTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1989/0940

STEP NO--UR/0096/70/017/003/0034/0036

CIRC ACCESSION NO--P0107469

UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0107469

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A 2 STAGE INTERMEDIATE STEAM SUPERHEATER OPERATING IN A 907-833DEGREES ZONE ON STEAM INTRODUCED FROM A GAS MAZUT STEAM GENERATOR AT 382DEGREES AND 32.5 KG-CM PRIME2 AND PRODUCING STEAM AT 570DEGREES AND 31.0 KG-CM PRIME2 HAD PURELY CONVECTIVE CHARACTERISTICS, GOOD DRAINAGE, AND WAS VERY SENSITIVE TO CHANGES IN LOAD AND OPERATING CONDITIONS. STEAM TEMP. INCREASED BY SIMILAR TO 2DEGREES FOR EACH CHANGE OF 1PERCENT IN THE EXCESS AIR COEFF. ALPHA AT THE NOMINAL LOAD D SUBN (90,000-110,000 KW) AND BY SIMILAR TO 0.9-1.0DEGREES FOR EACH CHANGE OF 1.0PERCENT IN D AT CONST. ALPHA. A CHANGE OF 1PERCENT IN ALPHA WAS EQUIV. TO A CHANGE OF SIMILAR TO 2000 KW IN D. AT THE NOMINAL PRESSURE, THE EFFICIENCY OF THE TURBINE AND THE INPUT TEMP. FELL AS THE LOAD WAS REDUCED. AT CONST. STEAM CONSUMPTION AND INPUT TEMP. AND VARIABLE PRESSURE, STEAM TEMPS. WERE LESS THAN THE RATED ONES BY 33DEGREES AND 5DEGREES AT LOADS OF 90,000 AND 150,000 KW, RESP. STEAM TEMPS. WERE INCREASED BY 3DEGREES AND 38DEGREES, RESP., AS THE FLUE GAS RECIRCULATION COEFF. WAS RAISED FROM 0 TO 10 AND 18PERCENT. STEAM AT THE RATED TEMP. WAS PRODUCED AT LOADS OF (0.7-1.0) D SUBN WHEN THE UPPER TIER OF BURNERS WAS USED, FLUE GAS WAS RECIRCULATED, AND THE CALCD. VALUE OF ALPHA WAS USED.

UNCLASSIFIED

USSR

UDC: 621.372.543.2

KRUKHMALEV, Y. V., KRUKHMALEVA, V. D.

"A Multipole Filter Based on Parallel Connection of Band Filters"

Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR (Works of Academic Institutes of Communications. Ministry of Communications of the USSR), 1970, vyp. 51, pp 79-86 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6A141)

Translation: The paper deals with a multipole filter synthesized by parallel connection of a number of band filters. Formulas are derived on the basis of the general theory of a two-terminal pair network for calculating the working constant of transmission of this filter from known parameters of the component band filters. Resumé.

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USSR

UDC: 621.372.543.2

KRUKHMALEV, V. V., KRUKHMALEVA, M. D.

"A Multipole Filter Based on Parallel Connection of Band Filters"

Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR (Works of Academic Institutes of Communications. Ministry of Communications of the USSR), 1970, vyp. 51, pp 79-86 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6A141)

Translation: The paper deals with a multipole filter synthesized by parallel connection of a number of band filters. Formulas are derived on the basis of the general theory of a two-terminal pair network for calculating the working constant of transmission of this filter from known parameters of the component band filters. Resumé.

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72 028 UNCLASSIFIED PROCESSING DATE--090170
FILE--SPECIFICITY OF THE COMPLEMENT FIXATION REACTION IN DIAGNOSIS OF Q
FEVER -U-
THOR-(05)-MARTYNYUK, YU.V., ERDINA, I.A., TITOV, M.B., OBLENSKAYA, G.I.,
KRUZIKER, M.D.
COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII, I IMMUNOBIOLOGII, 1970, NR 4,
PP 55-59
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--Q FEVER, BLOOD SERUM, ANTIBODY, ANIMAL DISEASE THERAPEUTICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
INDEX REEL/FRAME--1990/1539

STEP NO--UR/0016/70/000/004/0055/0059

ARC ACCESSION NO--AP0109599

UNCLASSIFIED

1/2 028

UNCLASSIFIED

PROCESSING DATE--09OCT70

RC ACCESSION NO--AP0109599

STRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY WAS MADE OF THE SPECIFICITY OF THE COMPLEMENT FIXATION REACTION IN EXAMINATION OF THE SERA OF 429 PATIENTS FROM THE THERAPEUTIC DEPARTMENTS, 1,730 PATIENTS WITH FEBRILE CONDITIONS OF VARIOUS ETIOLOGY, AS WELL AS OF 153 PATIENTS SUFFERING FROM CARCINOMA AND LYMPHOGRANULOMATOSIS. BESIDES, SERA PRESERVED FOR A PROLONGED PERIOD OF TIME WERE SUBJECTED TO EXAMINATION. THE RESULTS OBTAINED POINTED TO THE HIGH SPECIFICITY OF THE MENTIONED REACTION IN DIAGNOSIS OF Q FEVER. NOT IN A SINGLE CASE WAS THERE NOTED ANY ELEVATION OF SPECIFIC COMPLEMENT FIXATING ANTIBODIES IN DISEASE OF NON Q RICKETTSIAL ETIOLOGY, THE PERCENTAGE OF ANAMNESTIC REACTIONS REVEALED IN THE LATTER PATIENTS APPROACHED THAT OBTAINED IN STUDYING THE IMMUNOLOGICAL STRUCTURE OF THE HEALTHY POPULATION. NEVER WERE NONSPECIFIC RESULTS OBTAINED WHEN THE SERA WERE PROPERLY PRESERVED.

USSR

UDC 616.981-718.073.737

MARTYNYUK, Yu. V., EMDINA, I. A., TITOV, M. B., OBOLENSKAYA, G. I., ~~KRIKHYER, M. D.~~,
SUPRUNOVICH, M. S., ZABNINA, S. G., and MOSKAL'CHUK, Z. A., L'vov Institute of
Epidemiology and Microbiology

"Specificity of the Complement Fixation Reaction in the Diagnosis of Q Fever"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, 1970, pp
55-59

Abstract: Study of the immunological structure of the L'vov population with respect to Q fever, using the complement fixation reaction with antigen from *Rickettsia burneti*, revealed the highest number of positives (18-21%) among livestock handlers, meat plant workers, etc., as compared with 10.7% in the population at large. Serological examination of 429 hospitalized patients with cardiovascular, respiratory, liver, kidney, gastrointestinal, endocrine diseases, etc., 1730 febrile patients suffering from typhoid, influenza, meningoencephalitis, and other infectious diseases, and 158 cancer patients showed that about 12% had complement-fixing antibodies to the specific Q-fever antigen, or about the same rate as in the general population. There was no increase in the level of specific complement-fixing antibodies in any of the patients with diseases

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MARTYNYUK, Yu. V., et al, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii,
No 4, 1970, pp 55-59

of non-Q-fever etiology. Even when the sera were stored for as long as 3-4
months (at 4°C) no nonspecific reactions were observed.

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1/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--DUCTILITY OF HIGH STRENGTH CONSTRUCTIONAL ALLOY STEELS -U-

AUTHOR--(05)-BRAUN, M.P., BORISOV, G.P., KRUKOVSKAYA, G.N., MORZHARETTO,
A.A., SERGEYEV, I.V.
COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., CHERN. MET. 1970, 13(2), 123-5

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--STRUCTURAL STEEL, IMPACT STRENGTH, STEEL HEAT TREATMENT, STEEL
HARDENING, METAL CASTING, ALLOY STEEL, CHROMIUM STEEL, MANGANESE STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/1787

STEP NO--UR/0148/70/013/002/0123/0125

CIRC ACCESSION NO--AT0115616

UNCLASSIFIED

AA9025826

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R002201610019-9"

2/2 027

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AT0115616

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IMPACT STRENGTH OF THE CAST CONSTRUCTION STEEL WAS INCREASED BY APPLYING OPTIMAL ALLOYING AND HEAT TREATMENT WHILE MAINTAINING 36-37 HRC HARDNESS. EIGHT GRADES OF STEEL (CR 1.08-1.66, SI 0.40-2.79, MN 1.58-2.29PERCENT) WERE MELTED IN A BASIC INDUCTION FURNANCE DEOXIDIZED WITH 0.1PERCENT AL, AND CAST. THE CASTINGS WERE ANNEALED 6 HR AT 950DEGREES AND CUT INTO BARS WHICH WERE NORMALIZED AT 950DEGREES. BILLETS WERE (1) QUENCHED FROM 930-40DEGREES, (2) NORMALIZED AT 930-40DEGREES WITH SUBSEQUENT TEMPERING AT 200DEGREES, OR (3) HEATED 1 HR AT 300-320DEGREES AND QUENCHED IN MOLTEN SALTPETER. THE IMPACT STRENGTH AND HARDNESS WERE DETD. AFTER EACH OF THE 3 HEAT TREATMENT CONDITIONS: A STEEL AT GIVEN CONDITIONS AFTER LOW TEMP. TEMPERING MAY HAVE A LARGER OPTIMUM CONCEN. OF CR, MN AND SOME OTHER ALLOYING ELEMENTS THAN AFTER MEDIUM OR HIGH TEMP. TEMPERING. THE OPTIMUM CONCNS. OF THE ALLOYING INGREDIENTS ARE INTERRELATED.

FACILITY: INST. PROBL. LIT'VA, KIEV, USSR.

UNCLASSIFIED

USSR

UDC 576.851.589:615.779

RAUTENSHTEYN, Ya. I., ~~KRIKOVSKAYA, G. Ye.~~, BLOKHINA, T. P., and SOLOV'YEVA, N. Ya., Institute of Microbiology, Academy of Sciences USSR, Moscow

"The Production of Virulent Mutants of Temperate Phages of Lysogenic Cultures of the *Bacillus thuringiensis* Group by the Antibiotic Vancomycin"

Moscow, Mikrobiologiya, Vol 41, No 1, Jan/Feb 72, pp 177-178

Abstract: Fifty-one strains of the following varieties of *Bacillus thuringiensis* were tested: var. *galleriae*, *dendrolimus*, *caucasicus*, *alesti*, and *Bac. thuringiensis*, I serotype. *Bacillus cereus*, *Bac. insectus*, and a pigmented strain similar to *Bac. insectus* were tested simultaneously. Virulent mutants were produced from the fresh growth of all 16 strains of *Bac. thuringiensis* var. *galleriae* cultured on meat-peptone agar to which two drops of vancomycin were added in a concentration of 100 g/ml. Some of the strains were affected by smaller antibiotic concentrations. The presence of a virulent phage was confirmed by its isolation and by testing its multiplication in the homologous bacterial culture from which it was isolated. Vancomycin failed to produce similar results in other subspecies tested.

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USSR

UDC 621.396.963.3:629.7.058.6

KRUKOVSKIY-SINEVICH, K. B., SHUMKOV, V. G.

"Correlation Function of Some Nonstationary Processes"

Sb. nauch. tr. Kiev. in-t inzh. grazhd. aviatsii (Collection of Scientific works of the Kiev Institute of Civil Aviation Engineering), 1971, vyp. 6, pp 30-33 (from RZh-Radiotekhnika, No 6, Jun 72, Abstract No 6G26)

Translation: An expression is obtained for the correlation function of noise caused by reflection of a signal of arbitrary duration from small irregularly arranged targets. The bibliography has 4 entries.

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AA0040756

KRULEVETSKIY S.A.

UR 0482

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Soviet Inventions Illustrated, Section I Chemical, Derwent,

234624 MOULD LUBRICATOR FOR CONTINUOUS CASTING

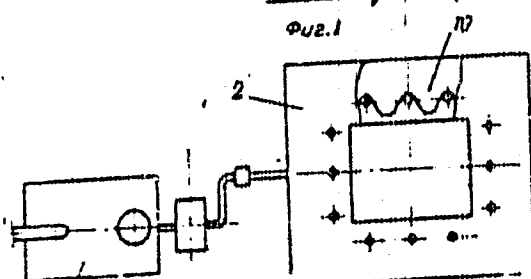
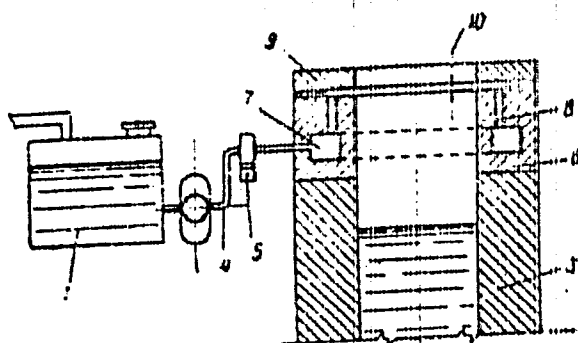
PLANTS uses feed channels which issue above the collector so as to ensure even distribution of lubricant round the mould perimeter. Lubricant is pumped etc. from tank 1 to the frame 2 on the mould 3 and via a feedline 4 with choke 5. It thus reaches the collector 7 and as this fills so the lubricant fills all the channels 8. When there is excess lubricant pressure in the collector, the lubricant is fed in identical portions into all these channels and thus flows out at the mould perimeter in identical portions. 7.10.63. as 1031428/22-2. EVTEEV D.P. et al. Metallurgical Plant Design Inst. (26.6.69.) Bul.4/10.1.69. Class 31c. Int.Cl. B22d.

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19750439

AA0040756



19750440

AA0040756

AUTHORS: Yevteyev, D. P.; Zhidovinova, M. M.; Karpeka, V. A.;
Kaushanskiy, A. S.; Krulevetskiy, S. A.; Pravitin, V. S.;
Satanovskiy, Ya. Ye.; Ful'makht, V. V.; Shabanov, A. N.

Gosudarstvennyy Soyuznyy Institut po Proyektirovaniyu
Metallurgicheskikh Zavodov

19750441

7/3

1/2 021 UNCLASSIFIED PROCESSING DATE--0200770
TITLE--COMPLEXING OF SUBSTITUTED PHENOLS AND THEIR ETHERS WITH AROMATIC
AMINO SULFIDE COMPOUNDS -U-
AUTH--(U2)-KRULIKOVSKAYA, YE.A., SAVINTSEVA, S.A.
COUNTRY OF INFO--USSR *R*
SOURCE--AM. DASHCH. KHIM. 1970, 40(2), 363-7
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ORGANIC COMPLEX COMPOUND, PHENOL, ETHER, SULFIDE, UV SPECTRUM,
IR SPECTRUM, AMINE, SULFUR OXIDE

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FILM--1922/1568 STEP NO--UR/0079/70/043/022/0363/0367
CIPC ACCESSION NO--AP0112562

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112562

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. UV SPECTRA (CURVES SHOWN) WERE REPORTED FOR 2,6-DIBROMO,4-NITROPHENOL (I) AND THE CORRESPONDING ANISOLE AND THEIR SYSTEMS WITH (P-H SUB2 NC SUB6 H SUB4) SUB2 S, (P-H SUB2 NC SUB6 H SUB4 CH SUB2) SUB2 S, (P-ME SUB2 NC SUB6 H SUB4) SUB2 S, H SUB2 NC SUB6 H SUB4 S ME, H SUB2 NCH SUB2 CH SUB2 SC SUB6 H SUB4 ME, P-H SUB2 NC SUB6 H SUB4 SPH, AND THE CORRESPONDING SULFOXIDES. THE COMPLEX FORMATION OF I WITH THESE SULFIDES WAS SHOWN BY IR AND UV SPECTRA TO BE OCCURRING VIA THE PHENOLIC OH GROUP AND FORMATION OF AN AMMONIUM BAND OF ABSORPTION. THE SULFOXIDES IN FORMING COMPLEXES WITH I AND ITS ANALOGS REDUCED THE DEGREE OF THE NORMAL DISSOCN. OF THE SUBSTITUTED PHENOLS AND SHOWED NO PRESENCE OF AMMONIUM BANDS IN THE UV SPECTRUM. HOWEVER, I AND ITS ME ETHER GAVE COMPLEXES WITH AMINO SULFOXIDES AS THE SD BAND WAS SHIFTED TOWARD LONGER WAVELENGTHS.

UNCLASSIFIED

1/2 C28 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--VISCOMETER FOR HIGHLY VOLATILE AND HYGROSCOPIC LIQUIDS -U-

AUTHOR--(04)--ARUMGALZ, B.S., DEREVSKAYA, V.I., TRABER, D.O., ANYANOVA, R.K.

COUNTRY OF INFO--USSR

SOURCE--ZAVCO. LAB. 1970, 36(2), 246-7.

DATE PUBLISHED-----70

SUBJECT AREAS--METHODS AND EQUIPMENT, PHYSICS

TOPIC TAGS--VISCOMETER, SODIUM COMPOUND, FLOW MEASUREMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1446

STEP NO--0032770703670017024670247

CIRC ACCESSION NO--AP0112438

UNCLASSIFIED

2/2 028

UNCLASSIFIED

PROCESSING DATE--2000070

CIRC ACCESSION NO--AP0112438

ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. A HERMETIC VISCOMETER IS DESCRIBED WITH A "HANGING" LEVEL IN WHICH THE FLOW TIME OF THE STUDIED LIQ. IS INDEPENDENT OF ITS VOL. TO TEST THE VISCOMETER, THE VISCOSITY OF 10% SOLNS. OF NAI IN MECH. AT 50DEGREES WAS MEASURED. NO DETECTABLE CHANGE OF CCACNS. OF NAI WAS OBSD. AFTER 40 CONSECUTIVE MEASUREMENTS WITH THE SAME SAMPLE, I.E., AFTER 6 HR. FACILITY: SEV.-ZAPAD. ZAOCH. POLITEKH, INST., LENINGRAD, USSR.

UNCLASSIFIED

KRUMIN, K. A.

Traumatology & Orthopedics

EXPERIENCE IN PREVENTION OF CHILD INJURY IN LATVIAN SSR

UDC: 617-001-073.2 (044.4)

Article by V. M. Krumin, K. A. Krumin, K. Ya. Krumin, and N. I. Krumin
Research Institute of Traumatology and Orthopedics, Latvian SSR Academy of Sciences
Meditsinskaya Zhurn., Moscow, No 4, 1977, pp 51-58

Prevention of child injury is closely related to development of medicine, pedagogy, psychology, social hygiene, child psychology, health services and sports, physical culture, children's development of legislation on child and adolescent labor safety, sociopsychiatric living conditions in urban and rural areas, and scientific and technological progress.

Some generalization of experience among children was practiced for a long time. This did not include organization of control of child injuries, but in various historical periods it was reflected in the principles and systems of child upbringing.

The ancient Greeks strived to rear a handsome, brave and strong man, in their expression "a perfect citizen," through meticulous care of children, prevention of injuries to the body, conditioning of the senses, instilling physical and labor skills, and discipline.

Many monuments to Russian culture of the 15th-17th centuries also had inscriptions glorifying the profound ideas of progressive people of those times about childhood hygiene and physical conditioning of children.

The prominent state figure of the 17th century and pedagogue, I. I. Belov, gave a number of concrete instructions on the prevention of traumatism among children: "... do not entrust children to youngsters and do not allow them to take in their hands anything that could harm them." And further, "... the art of bringing children up lies in diverting them from what could only harm them, without inhibiting their playfulness, and doing this without force..."

The idea of preventing injury among children while in school is found in Plato and Aristotle, Rabelais and Rabelais, Feller and Helvetius, Frolovich and Radtshehev.

KRUMIN; V. M.

PART V. ELECTRIC FISHES

ELECTRIC DISCHARGES OF THREE SPECIES OF NON-ELECTRIC BLACK SEA FISH

JPRS 55982
15 May 72

Translated by S. M. Kopylov, V. M. Krumin, M. A. Shchegolev and V. S. Zolotarev.
Serapopoli, Kiev. Biologicheskoe, No. 5, 1971, 124-130. Naukova Dumka.
pp 113-116.

Until recently it was assumed that all fish can be classified as strongly electric, using their strong fields with a strength of hundreds of volts along the length of the fish for defense and attack, and weakly electric, using their pulsating fields with a strength of tens-hundreds of millivolts for spatial orientation, and also non-electric species of fish. Biologists assigned the overwhelming majority of the species to the third group. Recently, as a result of studies by H. Lissman (1950), who studied the mechanism of electrolocation in weakly electric fish (Electrophorus), and U. Munro, who discovered a capacity of fish to emit waves of a new physical nature (called hydraulic waves), interest in electricity, the electric properties of fish has increased considerably.

Investigations of non-electric fish made by the authors during 1957-1968 revealed that many species of fish earlier considered non-electric in actuality are capable of emitting weak electric discharges (Zolotarev, 1968).

We will examine the electric discharges of three species of school fish in the Black Sea: Jackfish (Trachurus trachurus L.), sea bream (Atherina hepsetus Linnaeus) and anchovy (Engraulis mordax Walbaum). In experiments conducted in aquariums at the Gradovskoye Division of the Institute of Biology of Southern Seas in August 1968 we studied young atherines (120 fish) measuring 2-3 cm and adults (50 fish),

1. Demakov, 1962.

USSR

UDC 597.591.175

PROTASOV, V. R., BASOV, B. M., KRUMIN, V. M., ORLOV, A. A., and KUZNETSOV, V. A., Institute of Evolutionary Morphology and Ecology of Animals, USSR Academy of Sciences, Moscow

"Low-Frequency Electrical Discharges of Nonelectrical Fish"

Moscow, Zoologicheskii Zhurnal, Vol 50, No 5, May 71, pp 779-782

Abstract: Electrical discharges from a number of nonelectric fish in the frequency range of 0.2 to 12.0 cycles were recorded. The fish used differed in their movements, their structural make-up, excitability, and respiratory activity. The oscillograms obtained could be separated into two groups: the first one reflects the respiratory processes of the fish. In this case, potentials can be recorded when the fish are in a quiet state close to the electrodes. Values of 5-20 microvolts were recorded. The second group of oscillograms reflects the motor activity of the fish during excitation. The amplitude of these potentials is considerably higher and reaches 150 microvolts. Amplitude and frequency of the impulses are increased with increasing excitation of the fish. These impulses are caused not only by neuromuscular activity but also by the movement of the fish between the electrodes. The potentials are specific for each fish species. It was concluded that degree
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USSR

PROTASOV, V. R., et al., Zoologicheskii Zhurnal, Vol 50, No 5, May 71,
pp 779-782

of excitation and fish mobility can be directly related to the oscillograms. The low-frequency impulses from some groups and schools of fish were recorded also. A summation effect of frequency as well as duration of the impulses was found. It was noted that there was some synchronization in the respiratory rhythm of the fish.

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- 93 -

USSR

UDC: 538.3.538.4:621.313.333

KREMIN', Yu. K.

"An Approximate Method for Computing the Forces Acting on a Conducting Body in a Traveling Magnetic Field, and Its Physical Interpretation"

Riga, Magnitnaya gidrodinamika, No 2, 1972, pp 97-102

Abstract: In place of the usually complex computations of electrodynamic forces and processes in conducting bodies inside a traveling magnetic field, the author of this paper offers a simple graphical method of determining these forces for any values of the parameters describing the process. A knowledge of only the small quantity of numerical values of the parameters characterizing the interaction is required; these can be theoretically or experimentally determined. The explanation of the method of solving this approximate calculation is given for various classes of conducting body: the half-space, a strap of specified thickness in a two-sided inductor and in a one-sided inductor, a solid cylinder of specified radius, a hollow cylinder of specified inside and outside radii, and a sphere of specified radius in a cylindrical inductor.

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1/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--LEVELS OF NEODYMIUM-146 EXCITABLE IN THE, N, GAMMA, REACTION -U-
AUTHOR--(03)-BERZINS, V., KRUMINA, A., PROKOFEYEV, P.T.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(4), 824-7
DATE PUBLISHED-----70
SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY
TOPIC TAGS--NEODYMIUM ISOTOPE, EXCITED STATE, NUCLEAR REACTION, CONVERSION
ELECTRON SPECTRUM, NEODYMIUM COMPOUND, GAMMA RAY, BETA DECAY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3009/0106 STEP NO--UR/0048/70/034/004/0824/0827
CIRC ACCESSION NO--AP0138971
UNCLASSIFIED

2/2 018

CIRC ACCESSION NO--AP0138971

UNCLASSIFIED

PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE SPECTRUM OF CONVERSION E AND GAMMA RAYS FORMED DURING THE PRIME145 ND(N,GAMMA) PRIME146 ND REACTION WAS STUDIED BY USING A ND SUB2 0 SUB3 TARGET ENRICHED TO 94.4PERCENT IN PRIME145 ND. A SCHEME OF ENERGY LEVELS AND GAMMA TRANSITIONS IN PRIME146 ND IS PRESENTED BY USING ALSO LITERATURE DATA ON BETA DECAY AND (N,ALPHA) REACTIONS.

UNCLASSIFIED

Inorganic Compounds

USSR

UDC 541.49

KRIMINA, V. T., ASTAKHOV, K. V., and BARKOV, S. A., Order of Labor
Red Banner State Pedagogic Institute imeni V. I. Lenin, Moscow,
Ministry of Education RSFSR

"Complex Compounds of Titanium-IV and Vanadium-III with Diethylene-
triaminepentaacetic Acid"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 44, No 7, Jul 70, pp 1609-
1613

Abstract: Formation of complexes of Ti^{4+} and V^{3+} with diethylene-
triaminepentaacetic acid (H_5P) in aqueous solutions was studied
by the spectrophotometric method. Only complexes with a 1:1
molar ratio of the two components (metal ion and H_5P) were formed.
The following complexes formed in the pH ranges indicated: $TiHP$
(pH 1.3-1.7), TiP^- (pH 1.7-2.0), VP^- (pH 0.4-0.9). The negative
logarithms of the acidolysis and dissociation constants of the
three complexes were calculated.

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1/2 010 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--COMPLEXING OF PRASEODYMIUM WITH DIETHYLENTRIAMINEPENTAACETIC ACID
-U-
AUTHOR--(03)-KRUMINA, V.I., ASTAKHOV, K.V., BARKOV, S.A.
COUNTRY OF INFO--USSR K
SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 422-5
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PRASEODYMIUM COMPOUND, COMPLEX COMPOUND, ACETIC ACID,
SPECTROPHOTOMETRIC ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1987/0325 STEP NO--UR/0076/70/044/002/0422/0426

CIRC ACCESSION NO--AP0103980
UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--10SEP70

CIRC ACCESSION NO--AP0103980

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COMPLEX FORMATION OF PR PRIME3 PLUS WITH H SUB5 L (DIETHYLENETRIAMINEPENTAACETIC ACID) IN AQ. SOLNS. IS STUDIED BY SPECTROPHOTOMETRIC METHODS. TWO COMPLEXES ARE FORMED: PRL PRIME2 NEGATIVE AT PH OF 2.2 AND PR SUB2 L PLUS AT PH GREATER THAN 6. THE INSTABILITY CONSTS. OF THE COMPLEXES WERE DETD.; THE PK SUBH ARE 21.79-22.27 AND 27.89-27.92, RESP.

UNCLASSIFIED

1/2 019

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--NEODYMIUM 144 LEVELS EXCITED DURING THE CAPTURE OF THERMAL NEUTRONS

-U-

AUTHOR--(03)-BERZIN, YA.YA., KRUMINYA, A.YE., PROLOFEYEV, P.T.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 449-53

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--NUCLEAR ENERGY LEVEL, CONVERSION ELECTRON SPECTRUM, NEODYMIUM ISOTOPE, THERMAL NEUTRON, NEUTRON ABSORPTION, BETA SPECTROMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0219

STEP NO--UR/0048/70/034/002/0449/0453

CIRC ACCESSION NO--AP0105295

UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--2300770
CIRC ACCESSION NO--AP0105295
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONVERSION SPECTRA WERE MEASURED
FOR THE E EMITTED IN THERMAL N CAPTURE BY THE PRIME143 ND NUCLEUS TO
OBTAIN MORE ACCURATE MULTIPOLARITIES AND LEVEL ENERGIES. THE
MEASUREMENTS MADE WITH A BETA SPECTROMETER HAVING A RESOLN. OF
0.1-0.4PERCENT. THE TARGETS HAVE THICKNESSES OF 1.5 AND 2.3 MG-CM
PRIME2 FOR E ENERGIES 150-900 AND 900-1800 DEV, RESP. ALTOGETHER, 47
LINES ARE TABULATED AND INTENSITIES ARE GIVEN WITH ERRORS OF
20-50PERCENT. AN INTERPRETATION OF THE LEVELS AT 596, 1315, 1510,
1560, 1520, 2295, 1792, 2093, 2369, 2866, 3027, AND 3126 KEV IS GIVEN.
INTERNAL CONVERSION COEFFS. WERE DETD. FOR THE VARIOUS TRANSITIONS.
FACILITY: INST. FIZ., RIGA, USSR.

UNCLASSIFIED

USSR

UDC 621.311.153.501.21.001.24:631.3

GAMI, A. Z., KRUMM, L. A., SHER, I. A.

"Requirements Imposed on Programs for Calculating the Stationary Conditions of Power Systems"

V sb. Probl. tekhn. elektrodinamiki (Problems of Technical Electrodynamics -- collection of works), vyp. 25, Kiev, Naukova Dumka Press, 1970, pp 53-56 (from RZh-Elektrotehnika i Energetika, No 4, Apr 71, Abstract No 4 Ye252)

Translation: The requirements imposed on the programs for calculating stationary conditions are described. The conditions that preparation of the initial information must satisfy are indicated. The basic procedural principles are described on the basis of which a program for calculating the stationary conditions has been developed at the Siberian Power Engineering Institute of the Siberian Department of the USSR Academy of Sciences. The bibliography has 2 entries.

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- 121 -

USSR

UDC: 621.311.016.01:661.5

KHUSK, L. A., KURASHKO, A. A., and KURASHKO, N. I., Irkutsk

"Complex Computation of Short-Term Electrical Power System Modes
Using the Reduced Gradient Method"

Moscow, Izvestiya Akademii Nauk SSSR--Energetika i transport, No. 1,
January-February, 1971, pp 5-15

Abstract: The authors assert that for modern combined, and especially single electrical power systems, it is extremely important to develop methods, algorithms, and programs for the complex computation of permissible modes and the optimization of active and reactive generator power, voltages, and transformation factors in short-term daily or weekly cycles. To satisfy this requirement, the first-named author has developed the reduced gradient method in 1961, and on the basis of this method an algorithm and programs for complex optimization of twenty-four hour electric power system operation were prepared for low-power BESM-2 and Ural-2 electronic computers. The purpose of the present paper is to refine the reduced gradient method, first proposed by L. A. Khusk in the

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USSR

KRUSCH, I. I., et al, Izvestiya Akademii Nauk SSSR -- Energetika i transport, No 1, January-February 1971, pp 3-15

Gradientnyy metod optimizatsii rezhima ob'edinennoy energeticheskoy sistemy
(The Gradient Method of Optimizing Combination Power System Operation), read before the All-Union Conference on Voltage Quality and Control in Electrical Nets and Systems, and published in the Collection of Reports of the Power Engineering Institute imeni G. M. Krzhizhanovskiy, 1961. In the present paper, the method is put in more general form, and is more systematically used in combination with the group relaxation method. The problem of computing the permissible mode is solved in general form, the concept of subsystem equivalency is used, the methods and algorithms for hydroelectric station cascading are made practical, a simplified method for optimizing the state of operating hydroelectric stations is obtained, and the characteristics of hydroelectric stations under limited 24-hour control are considered.

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- 94 -

USSR

UDC 539.192/.194+535.33/.34.01

KRUMSHTEYN, Z. V., PETRUKHIN, V. I., SMIRNOVA, L. M., SUVEROV, V. M., YUTLANDOV, V. A.

"Investigation of the Character of the H-O Bond in Certain Oxygen-Containing Acids With the Aid of π -Meson Capture by Hydrogen"

Issledovaniye khraktera svyazi H-O v nekotorykh kislorodsoderzhashchikh kislotakh s pomoshch'yu zakhvata π -mezonov vodorodom (cf. English above), Joint Institute of Nuclear Research, Laboratory of Nuclear Problems, No. P12-5224, Preprint, Dubna, 1970, 10 pp, ill. (from RZh-Fizika, No 5, May 71, Abstract No 5D93)

Translation: The degree of ionicity of the H-O bond in sulfuric acid, nitric acid, phosphoric acid, boric acid, and oxalic acid was evaluated with the aid of π -meson capture by hydrogen. Oxalic acid should belong to a group of stronger acids on the basis of the degree of the ionicity of the H-O bond.

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0232.

UDC 615.28:547.337.3

SHAPILOV, O. D., RACHINSKIY, F. YU., OSIPYAN, V. T., DEKEL-BAUM, A. B., POTANENKO, T. G., KRUMENINA, A. A., Military Medical Academy imeni S. M. Kirov, Leningrad

"Hexamethyleneimmonium Compounds Containing Alkoxy-, Hydroxy- and Cyanoalkyl Substituents at the Quaternary Nitrogen Atom, and Their Bactericidal Properties"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, No 2, Feb 71, Vol 5, pp 19-22

Abstract: Hexamethyleneimmonium compounds with alkyl, carb-alkoxymethyl, phenoxyethyl and other substituents with 17 to 21 carbon atoms at the N exhibit marked bactericidal action; ammonium compounds with alkoxyethyl groups at the quaternary nitrogen atom are both good bactericides and highly water-soluble.

The author obtained a number of hexamethylinonium compounds by alkylation of tertiary derivatives of hexamethylenimine, and also some highly water-soluble compounds through synthesis of substances

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- 42 -

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SHAPIRO, O. D., et al, Khimiko-Farmatsevticheskii Zhurnal,
No 2, Feb 71, Vol 5, pp 19-22

with cyanoethyl and cyanomethyl groups at the quaternary nitrogen atom. Thirty-six compounds in all were studied for bactericidal and other properties.

Some 30 of these were quite effective against E. coli and Staphylococcus aureus, and were moderately or highly water-soluble. Physical and bactericidal properties are given in the paper.

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USSR

UDC 541.49:541.123.2:546.185+547.564

KRUPATKIN, I. L., SHIRSHINA, L. G., and SHCHERBAKOVA, T. A., Malinin Polytechnical Institute

"Study of the Double Systems of Phosphoric Acid With Some Derivatives of Phenol and Naphtols"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 9, Sep 72, pp 1881-1884

Abstract: Seven double systems of phosphoric acid with m-chlorophenol o-nitrophenol, m-nitrophenol, thymol, vaniline, α -naphtol, and β -naphtol were investigated by means of visual-polythermal method in temperature range 0-140°, using fusibility and lamination as the end points. It has been shown that the system with m-chlorophenol is a system with upper critical point located considerably above the 140°. The systems with o- and m-nitrophenols, α - and β -naphtols and thymol correspond to systems with lower critical points being in the range of metastable state below the experimentally determined monotectic temperatures. It was established that the temperatures of monotectic reactions and the melting points of o-, m- and p-derivatives of the phenol and α - and β -naphtols change symbatically. This does not occur with chlorophenols. In the system: phosphoric acid-vanilin a compound with a 1:1 composition has been noted, melting congruently at 96.8°.

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- 18 -

UDC 546.135-325-54-1454

USSR

KHUPATKIN, I. L., and BRATVUSHCHAK, A. H., Kalinin Polytechnical Institute

"Physico-chemical Analysis of Binary Systems of Phosphoric Acids and Some Ketones"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 45, No 1, Jan 71, p 177

Abstract: Binary systems of phosphoric acid with benzophenone, methyl-ethylketone, and cyclohexanone were studied by density, viscosity, surface tension and specific electroconductivity at 25, 35, and 45°C. In all systems, a 1:1 composition of the compounds formed was postulated on the basis of experimental data, except in the phosphoric acid-methyl-ethylketone system, where a small amount of a 2:1 compound forms. Analysis of electroconductivity data showed that addition products of phosphoric acid and benzophenone or cyclohexanone are weakly disproportionated; with methyl-ethylketone, 1,3,5,7,9 is nonconductive compounds. The compounds studied may be placed in the following order of decreasing basicity: methyl-ethylketone, cyclohexanone, benzophenone.

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USSR

UDC 541.123.4+546.185.325

KRUPATKIN, I. L., and SHIRSHINA, L. G.

"Equilibrium Between the Liquid Phases in the Ternary System Phosphoric Acid - Guaiacol - n-Octane"

Leningrad, Zhurnal Obshchey Khimii, Vol 43, No 11, Nov 73, pp 2344-2347

Abstract: Equilibria in the system phosphoric acid - guaiacol - n-octane were investigated under isothermal conditions in the 25-100°C range. With increasing temperatures, the conodes of the heterogeneous regions in the ternary system studied changed their direction, passing over isotherms with parallel conodes. Simultaneously the critical points were displaced along the binodal curve, passing through its maximum. As a result the curve of critical points acquired an S-shape. While separation into layers took place in all three component binary systems, an equilibrium between three liquid phases was absent.

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- 40 -

Acc. Nr:

AF0049119

Abstracting Service:

CHEMICAL ABST. 5/70

Ref. Code:

4P0079

KRUPATKIN I. L.

104510u Equilibrium of liquid phases in furfural-water-monoaliphatic alcohol systems. Krupatkin, I. L.; Glagoleva, M. F. (Kalinin, Politekh. Inst., Kalinin, USSR). *Zh. Obshch. Khim.* 1970, 40(1), 12-16 (Russ). Mutual sol. data were tabulated along with the values of α for the system of furfural, H_2O , and $PrOH$ or $iso-PrOH$ at 25° . These are given on a triangular diagram. The system with $iso-PrOH$ is azeotropic. In the systems of this type with lower ROH, the 1st 5 lower azeos. showed a regular change in the system with increased mol. wt. of ROH: the interaction with H_2O decreases and that with the aldehyde increases as R increases. G. M. Konolapoff

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Acc. Nr: **A0049120** - Abstracting Service:
CHEMICAL ABST. 5/70

Ref. Code:

4R0079

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[104480j Equilibrium of liquid phases in furfural-water-butyl acetate and furfural-water-ethyl acetoacetate system. Krupal-kin, I. L.; Glagoleva, M. F. (Kalinin, Politekh. Inst., Kalinin, USSR). Zh. Obshch. Khim. 1970, 40(1), 17-21 (Russ). Mutual soly. data were given in tabular and graphic forms for the systems of furfural-H₂O-BuOAc and furfural-H₂O-AcCH₂CO₂Et. The values of π for the systems were also reported. In both systems, the phase diagram had an area in which the layer formation occupied most of the total area. The conodes were found in a fan-shaped distribution toward the homogeneous binary system of furfural-ester. G. M. Kosolapoff

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1/2 013 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--LIQUID PHASE EQUILIBRIUMS IN FURFURAL, WATER, METHYL ETHYL KETONE AND
FURFURAL, WATER, DIISOBUTYL KETONE SYSTEMS -U-
AUTHOR--(02)--KRUPATKIN, I.L., GLAGOLEVA, M.F.

COUNTRY OF INFO--USSR

SOURCE--ZH. DASHCH. KHIM. 1970, 40(2), 261-6

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHASE EQUILIBRIUM, FURFURAL, WATER, METHYL ETHYL KETONE, PHASE
DIAGRAM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/0202

STEP NO--UR/0079/70/040/002/0251/0256

CIRC ACCESSION NO--AP0113141

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0113141

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DATA ON SOLV. OF FURFURAL, H SUB2 O, AND MECEET SYSTEM WERE TABULATED AND SHOWN IN PHASE DIAGRAM FORM, USING G. AND N AS AUXILIARY CONSTS., TO DESCRIBE THE COMPONENT INTERACTION, AT 25DEGREES. THE PRESENCE OF A ME GROUP IN THE KETON COMPONENT INCREASED THE MUTUAL SOLV. OF BOTH LIQS. IN THE BINARY SYSTEM OF KETONE H SUB2 O, WHILE AN ISO RU GROUP IN THE KETONE COMPONENT SHOWS AN OPPOSITE EFFECT, IN COMPARISONS OF THE PRESENT DATA WITH EXISTING INFORMATION ON SIMILAR SYSTEMS WITH OTHER KETONES.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--LIQUID PHASE EQUILIBRIUMS IN N,HEXANE, PYRIDINE
ACETATE, P, CRESOL (O, CRESOL) SYSTEMS -U-
AUTHOR--(02)--KRUPATKIN, I.L., KOTOVA, G.I. K
COUNTRY OF INFO--USSR
SOURCE--ZH. OBSHCH. KHIM. 1970, 40(2), 257-61
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHASE EQUILIBRIUM, HEXANE, PYRIDINE, ACETATE, PHASE DIAGRAM,
ISOMER, CRESOL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1993/0203 STEP NO--UR/0079/70/040/0027/0257/0261
CIRC ACCESSION NO--AP0113142
UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--02OCT70
CIRC ACCESSION NO--AP0113142
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PHASE DIAGRAMS WERE PRESENTED FOR
THE TITLE SYSTEM BOTH GRAPHICALLY AND TABULARLY AT 25 AND 35 DEGREES. IN
THE LIQ. PHASES OF THE BINARY SYSTEMS COMPLEXES OF 1:2 AND 1:1 RATIOS OF
PYRIDINE ACETATE AND THE CRESOL COMPONENT WERE DETECTED. THE
INTERACTION OF THIS SALT WITH THE CRESOL IS SOMEWHAT GREATER FOR THE
P,CRESOL THAN FOR THE M, ISOMER, AND IS VERY MUCH GREATER FOR O,CRESOL.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--TERNARY STRATIFYING SYSTEMS CONTAINING THREE CHEMICAL COMPOUNDS -U-

AUTHOR--(02)-KRUPATKIN, I.L., BASANOV, A.N.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 793-6

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BENZENE DERIVATIVE, CRESOL, DECANE, PHASE DIAGRAM, ISOTHERM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1997/0721

STEP NO--UR/0076/10/044/003/0793/0796

CIRC ACCESSION NO--AP0119628

UNCLASSIFIED

2/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70
CIRC ACCESSION NO--AP0119628
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TERNARY SYSTEM
BZME-M-CRESOL-N-DECANE CONTG. 3 COMPS. IN THE BINARY PREDOMINANT SYSTEM
BZME-M-CRESOL WAS STUDIED BY STRATIFICATION. THE EQUIL. ISOTHERMS OF
LIQ. PHASES OF SYSTEM WITH N-DECANE SHOWED FORMATION OF 1:2
BZME-M-CRESOL ADDUCT. A TRIANGLE PHASE DIAGRAM OF THE RODZEBODD GIBBS
TYPE IS GIVEN. FACILITY: KALININ. POLITEKH. INST., KALININ,
USSR.

UNCLASSIFIED

172 016 UNCLASSIFIED PROCESSING DATE--2000/10
TITLE--LIQUID PHASE EQUILIBRIUM IN THE ORTHOPHOSPHORIC ACID, WATER AND
CYCLOHEXANOL SYSTEM -U-
AUTHOR--(02)--KRUPATKIN, I.L., STEPANOVA, V.P.
COUNTRY OF INFO--USSR
SOURCE--Zh. Prikl. Khim. (Leningrad) 1970, 43(5), 1164-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHASE EQUILIBRIUM, TITRATION, PHOSPHORIC ACID, CYCLOHEXANOL,
CRITICAL POINT, DISTRIBUTION COEFFICIENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/1963 STEP NO--UR/COBQ/70/043/005/1164/1167
CIRC ACCESSION NO--AP0132224
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132224

ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. THE EQUIL. BETWEEN THE LIQ. PHASES WAS STUDIED AT 25DEGREES. THE POINTS OF THE BINODAL CURVE WERE FOUND BY ISOTHERMAL TITRN. AND THE COMPS. OF THE COEXISTING PHASES WERE ANALYZED FOR THE H SUB3 PO SUB4 CONTENT. THE MAX. H SUB3 PO SUB4 CONTENT IN THE COEXISTING PHASES WAS 61.3PERCENT AND THE MAX. H SUB3 PO SUB4 CONTENT IN THE EXT. WAS 67PERCENT. IN ADDN. TO THE LIMITING CONODE, 16 OTHER CONODES WERE FOUND, THE NOS. OF WHICH INCREASE FROM THE LIMITING CONODE TO THE CRIT. POINT OF THE ISOTHERMAL DISSOLN. THE CONODES WITH THE ALEKSEEV DIAM. AND THE DISTRIBUTION COEFFS. WERE THUS FOUND. THE CORRELATION OF THE CONODES WAS DONE ACCORDING TO D. B. HAND (1930).

FACILITY: KALININ. POLITEKH. INST., KALININ, USSR.

UNCLASSIFIED

USSR

UDC: 621.397:621.396.61

DALINENKO, N. K., YEFREMOV, V. A., DEMINA, N. F., KRUPCHATNIKOV, V. A.,
SURIKOV, I. N.

"A Method of Objective Measurement of the Noises and Signal From Fine Details
of Images of the Dissectors in the Small-Frame Scanning Mode"

Elektron. tekhnika. Nauch.-tekhn. sb. Elektronoluch. i fotoelektr. pribory
(Electronic Technology. Scientific and Technical Collection. Electron-Beam
and Photoelectric Devices), 1970, vyp. 4(18), pp 40-46 (from RZh-Radiotekh-
nika, No 5, May 71, Abstract No 5G113)

Translation: The authors discuss an objective method of measuring the signal-
-to-noise ratio and depth of modulation of the signals of fine details in an
image in cameras with dissectors in the small-frame scanning mode. The
characteristics of the equipment developed are presented together with the
results of measurements made by the proposed method. Resumé.

1/1

USSR

UDC 6161.9-005.1:544.271.1

SHAPILOV, O. D., RACHINSKIY, F. Yu., DELEL'BAUM, A. B., OSTREYAN, V. T.,
and KRUPENINA, A. A.

"Derivatives of Diethyl Ether Containing Phenoxy- and Hexamethylenecimonium
Groups, as Bactericides"

Leningrad, Zhurnal Prikladnoy Khimii, Vol XLIV, No 1, Jan 71, pp 223-226

Abstract: Some quite effective bactericides among hexamethylenecimonium
compounds have already been discovered (1968, 1970).

Of the subgroup mentioned above, 18 compounds were synthesized and tested
for bactericidal action (*Staphylococcus aureus*).

Of these 18, the bromide of the [δ -(2,4-dichlorophenoxy)-3'-(N-decylhexamethylenecimonium)] derivative of diethyl ether was found to be the most
promising. Physical constants of the 18 compounds and details of the
synthesis are included in the paper.

1/1

USSR

UDC 616.931.452+616.932]-092.9-07:616.153.1-074

KRUPENINA, V. I., Rostov-on-Don Scientific Research Antiplague Institute

"Blood Enzymes in Experimental Plague and Cholera Intoxication"

Moscow, Voprosy Meditsinskoy Khimii, Vol 17, No. 4, 1972, pp 396-400

Abstract: The effect of plague, cholera, and typhoid toxins on blood enzymatic activity was studied in white rats. Changes in the activity of glucose phosphate isomerase, alpha-amylase, alkaline phosphatase, lactate dehydrogenase, creatine kinase, and catalase were identical in response to all 3 toxins. Changes in the activity of 6 other enzymes varied: As compared to controls, acid phosphatase activity increased with plague and typhoid toxin but remained normal with cholera toxin; L-iditol hydrogenase activity increased somewhat with plague and typhoid but increased 6-7 times with cholera; ketose-3-phosphate aldolase activity remained unchanged with plague and cholera but increased 4 times with typhoid; fructose diphosphate aldolase activity increased with plague, decreased with cholera, and remained normal with typhoid; aspartate-aminotransferase and alanine-aminotransferase activity increased with plague and cholera and decreased with typhoid. In vitro interaction of isolated enzymes with the toxins resulted in no change in activity for 9 of the 12 enzymes. Evidence that many enzymes react identically to different toxins in vivo and that the

1/2

USSR

KRUPENINA, V. I., Voprosy Meditsinskoy Khimii, Vol 17, No.4, 1972,
pp 396-400

toxins do not change activity of most enzymes in vitro indicates that such changes are either nonspecific reactions to pathogens or are secondary phenomena. This evidence also contradicts theories based on the assumption that toxins affect blood enzymatic activity directly. A separate paper demonstrates that such activity changes involve alteration of enzyme quaternary structure.

2/2

Pathology

USSR

UDC 616.153.1-092

KRUPENINA, V. I., NIKIFOROV, V. N., and ROZHKOV, K. K., Rostov-na-Donu
Scientific Research Antiplague Institute, Central Clinical Hospital of the
Fourth Main Administration, Ministry of Health USSR, Moscow

"Mechanism of Change in the Level of Enzymatic Activity of Blood Serum in
Different Pathological Processes"

Moscow, Sovetskaya Meditsina, No 11, 1971, pp 23-29

Abstract: Experiments were conducted with animals infected with plague toxin, cholera toxin or typhoid bacteria. Serum levels of alanine- and aspartate-aminotransferase, alkaline phosphatase, acid phosphatase, and fructose diphosphate aldolase showed that the mechanism regulating enzymatic activity involves shifts in the quaternary structure of these enzymes. The actual process involves polymeric molecules found in the heavier enzyme molecules, and these polymers are capable of dissociation and reassociation under certain conditions. This enzymatic activity was studied in white rats with acute and chronic lesions of the liver caused by carbon tetrachloride as well as in animals poisoned with plague and cholera toxins, and in human subjects suffering from infectious hepatitis, myocardial infarction, and other diseases.

1/1

USSR

UDC 621.371.332.3

KRUPENIO, N. N., SHAPIROVSKAYA, N. Ya., and BROZDOVSKAYA, I. B.

"Radio Wave Scattering by Local Districts of the Moon, Mars, and Venus in the Centimeter and Decimeter Wavelength Ranges"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl. Sekts. 3 (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses; Section 3--collection of works) "Nauka," 1972, pp 13-18 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 1068)

Translation: From the diagram of inverse scattering for the moon, Venus, and Mars, the ratios of the diffusion component power to the total power of the radiated signal are computed for various wavelengths by the radar measurement method. The computations were made under the assumption of isotropism of the surface characteristics within the limits of the section participating in the radiation transfer. Two illustrations. N. S.

1/1

USSR

UDC 621.396.933:527.61:629.78.054.07

KRUPENIO, N. N. and CHERKASOV, V. V.

"Dispersion of 3-cm Radio Waves at the Landing Points of Automatic Stations 'Luna-16' and 'Luna-17'"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Temisy dokl. Sekts. 3 (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses; Section 3--collection of works) "Nauka," 1972, pp 9-12 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10659)

Translation: A description is given of the technique of measurements using the same methods of measurements at various heights of continuous 3-cm wavelength radiation as were used for obtaining flight altitude at the landing section. Results are given of computations of the specific electron paramagnetic resonance in terms of the angle of incidence of the wave and the flight altitude. One illustration, bibliography of five. N. S.

1/1

USSR

UDC: 539.14+539.143

DZHRIBUTI, R. I., KRUPENNIKOVA, N. B., MAMASAKHELISOV, V. I. (Member of the Georgian Academy of Sciences, Deceased), and TOMCHINSKIY, V. Yu.

"Charge Form factors of Li^6 , Be^9 , and C^{12} Nuclei in a Three-Particle Cluster Model"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSR, vol 68, No 1, 1972, pp 53-56

Abstract: This paper is the continuation of an earlier article by the same authors in the same journal mentioned above (Programma i tezis 22-go yezhegodnogo soveshchaniya to yadernoy spektroskopii i strukture atomnogo yadra -- Program and Theses of the 22nd Annual Conference on Nuclear Spectroscopy and Atomic Nucleus Structures -- part 1, Leningrad, 1972, p 216; Soobshcheniya AN GSSR, 66, No 3, 1972, p 565) investigating the development of the K-harmonic method as applied to the nucleon association model. By using formulas developed in the earlier article together with the Reinal and Reval coefficients, the authors obtain in the present article expressions for the charge form factors of Li^6 , Be^9 , and C^{12} three-particle nuclei. The authors promise a future article comparing the results of the present paper with available experimental data.

1/1

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1/2 022 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--EFFECTIVE FORCES AND THE THREE BODY PROBLEM IN NUCLEAR PHYSICS -U-
AUTHOR-(02)-DZHIBUTI, R.I., KROPENNIKOVA, N.B. K
COUNTRY OF INFO--USSR
SOURCE--YAD. FIZ. 1970, 11(2), 355-60
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY
TOPIC TAGS--THREE BODY PROBLEM, NUCLEAR PHYSICS, HELIUM ISOTOPE, INTEGRAL
CROSS SECTION, PHOTOEFFECT

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1980/0388 STEP NO--JR/0367/T0/011/002/0355/0360
CIRC ACCESSION NO--AP0040660

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--090CT70

CIRC ACCESSION NO--AP0043660

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EFFECTIVE FORCES FOR THE
PHOTODISINTEGRATION OF THE PRIMED HE NUCLEUS WERE CALCD. BY USING THE 1
PARAMETER IRVING FUNCTION AND A NEW NONLOCAL N-N POTENTIAL WITH
SEPARABLE VARIABLES. AT ALPHA SUBT EQUALS 0.68 FERMI PRIME NEGATIVE1,
RESULTS SHOW: BINDING ENERGY MINUS 8.2 (THEORETICAL) COMPARED TO MINUS
8.49 MEV (EXPTL.); COULOMB ENERGY 0.81 (THEORETICAL) COMPARED TO 0.76
MEV (EXPTL.); NUCLEAR RADIUS, CALCD. FROM THE COULOMB ENERGY, 2.10
(THEORETICAL) COMPARED TO 1.97 PLUS OR MINUS 0.01 FERMI (EXPTL.);
INTEGRAL CROSS SECTION OF DIPOLE PHOTOABSORPTION IS 67.2 (THEORETICAL)
COMPARED TO 62 PLUS OR MINUS 6 MEV MB (EXPTL.). A CURVE FOR THE CROSS
SECTION OF THE TOTAL PHOTODISINTEGRATION, I.E. PRIMED HE (GAMMA, N)2P,
REACTION IS CALCD. AND COMPARED WITH THE EXPTL. CURVE. FACILITY:
INST. FIZ., TBILISI, USSR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--INDIVIDUAL COMPOSITION OF A GASOLINE CONDENSATE FRACTION (INITIAL
BOILING POINT 150DEGREES) FROM THE PECHORA KOZHVA GAS CONDENSATE DEPOSIT
AUTHOR--(03)-~~GRUPENSKIY~~, V.I., STUKANOVA, L.N., FEDULOV, S.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., NEFT GAZ 1970, 13(3), 68

DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, MATERIALS

TOPIC TAGS--GASOLINE, CHEMICAL COMPOSITION, NATURAL GAS, PETROCHEMISTRY,
PETROLEUM DEPOSIT, GEOGRAPHIC LOCATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3001/2083

STEP NO--UR/0152/70/013/003/0068/0068

CIRC ACCESSION NO--AP0127456

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0127456

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FRACTION CONTAINED IS SIMILAR TO 100 HYDROCARBONS, INCLUDING 73.3PERCENT PARAFFINIC (52PERCENT N-PARAFFINIC), 1.3PERCENT AROMATIC, AND 25.4PERCENT NAPHTHENIC, BEING ALSO SUITABLE AS PETROCHEM. RAW MATERIAL, FACILITY: UKHT. IND. INST., UKHTA, USSR.

UNCLASSIFIED

172 009 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--MECHANICALLY STRONG CATALYSTS FOR LIQUID PHASE HYDROGENATION -U-

AUTHOR--(05)-SOKOLSKIY, D.V., ZHUBANOV, K.A., SHUMATEVA, N.F., GOGOL, N.A.,
KRUPENYA, N.G.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,354

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970

DATE PUBLISHED--03MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CATALYST, HYDROGENATION, CHEMICAL PATENT, GYPSUM, MECHANICAL
PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3007/0827

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0136261

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--27NOV70

IRC ACCESSION NO--AA0136261

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MECH. STABLE CATALYSTS ARE PREPD.
BY ADDING A GYPSUM BINDER TO THE CATALYST. FACILITY: INSTITUT
KHIMICHESKIKH NAUK AN KAZAKHSKOY SSR.

UNCLASSIFIED

Acc. Nr

AT0049568

Abstracting Service:
CHEMICAL ABST. 5-70

Ref. Code

4R0148

102872q Effect of combined methods of thermomechanical treatment on the properties of structural steel. Virakhovskii, Yu. G.; Gurevich, Ya. B.; Krupin, A. V.; Entin, R. I. (Mosk. Inst. Stali Splavov, Moscow, USSR). Izv. Vysk. Ucheb. Zaved., Chern. Met. 1970, 13(1), 147-50 (Russ.). The results are given of production and lab. comparative studies of the heat treatment of steel KhNMS (C 0.32, Cr 1.02, Ni 5.20, Mo 0.70, Si 0.87, Mn 0.38%; $A_{c1} = 715^\circ$, $A_{c2} = 790^\circ$) austenitized at 900° and tempered at 260° for 1 hr. High-and-low (deformation at 850° with 30% redn. in a single pass followed by ~67% combined redn. in 6 passes at 500°) and stepped heat treatment (30% redn. at 850° in a single pass followed by 30% redn. at 750° in a single pass and 30% redn. at both 850° and 500° in 2 passes) both gave more favorable strength and plasticity properties than quenching in water from 850° , and high- and low-temp. heat treatment individually. The practical possibilities of combined heat treatment are discussed. R. Hardbottle

REEL/FRAME

19801446

USSR

UDC: 632.95

LOPYREV, V. A., VERESHCHAGINA, T. N., KONONENKO, G. G., MAKARSKIY, V. V.,
KHUPIN, K. L., Leningrad Technological Institute of the Paper and Cellulose
Industry and Northwest Polytechnical Correspondence Institute

"A Method of Synthesizing 3-(5-Amino-1,2,4-triazolyl)-alkanoic Acids"

USSR Author's Certificate No 320496, filed 25 Dec 69, published 2 Feb 72
(from RZh-Khimiya, No 15, Aug 72, Abstract No 15N475P)

Translation: A method is proposed for synthesizing 3-(5-amino-1,2,4-triazolyl)-alkanoic acids (I) by reacting a dibasic aliphatic carboxylic acid with aminoguanidine salts. An effective and low-toxicity pesticide may be derived from compound I. Twenty three and eight tenths grams of aminoguanidine bicarbonate is gradually added to a solution of 20.8 grams of $\text{CH}_2(\text{COOH})_2$ in 200 ml of water at a temperature of 50-60°C, boiled for 6 hours, a solution of 10 grams of NaOH in 50 ml of water is added, boiled for 1 hour, evaporated to 50 ml, cooled, acidified with 10% HCl (acid) to a pH of about 3, the 3-(5-amino-1,2,4-triazolyl) acetic acid is filtered off; yield 60%, melting point 186-7°C (dissociation, water). 3-(5-Amino-1,2,4-triazolyl) propionic acid is also synthesized; yield 71%, melting point 184-5°C (dissociation, water).

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USSR

KRUPIN, V. D.

"Problems and Prospects of Biogeocenology"

Moscow, Priroda, No 5, May 71, p 103

Abstract: Biogeocenology was assigned a major place as a branch of biological science in a discussion conducted at a meeting of the Section of Chemical Technological and Biological Sciences held under the chairmanship of N. N. Semenov on 7 Jan 71. The purpose of the discussion, as pointed out by V. A. Kovda, Acting Chairman of the Section, was for all biologists, and also mathematicians, chemists, technologists, and engineers to realize the urgency of problems in the field of biogeocenology. Reports were given by representatives of various specialities, i.e., botanists, zoologists, microbiologists, soil scientists, geneticists, forest scientists, hydrobiologists, oceanologists, plant physiologists, and chemists. Ye. M. Lavrenko, S. S. Shvarts, N. V. Timofeyev-Resovskiy, A. A. Nichiporovich, Ye. N. Mishustin, A. A. Molchanov, A. N. Tyuryukanov, N. V. Dylis, B. A. Tikhomirov, N. I. P'yavchenko, G. G. Vinberg, M. M. Kamshilov, V. G. Bogozov, and T. V. Aristovskaya brought out in their talks the increasing importance of

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Environmental & Ecological Problems

USSR

KRUPIN, V. D., Moscow

"Greening of Moscow"

Moscow, Priroda, Nauka Publishing House, No 7, 1973, pp 115-116

Translation: The Problem "Concerning the Strengthening of the Protection and Improvement of Moscow City's Environment," was discussed at the session of the Moscow City Soviet held 17 March 1973¹.

Data according to which more than 300 enterprises were moved from the city during the past few years were cited at the session.

The general plan for the development of the city provides² for a considerably smaller construction density with consideration for natural climatic factors. A further development of green tracts in the city, and their conversion into green "diameters" which will begin at the forest-park belt and intersect the entire city with wide bands is planned. The planting area of Moscow, according to the general plan, will be increased to 30 m² per single

¹Byulleten' Moskovskogo Gorodskogo Soveta Deputatov Trudyareshchikhaya, 1973, No 8, Moskovskaya Pravda, 1973, Nos 64-69

²Stroitel'stvo i Arkhitektura Moskvy, 1971, 7-8, pp 56-61

USSR

KRUPIN, V. D., Priroda, No 7, 1973, pp 115-116

inhabitant. Moscow's forest-park protective belt will be widened to 275,000 hectares. As a reservoir of pure air it will serve to secure the improvement of the city's environment. The forest acts as a protective agent when it is a part of a system. This principle of the country's forestry science is at the basis of a system of open green territories in Moscow and its environs. The forest-park belt being separated by building belts in a number of places as yet does not present a continuous system of green tracts as is required for the city. For the purpose of reestablishing the continuity of the belt, territories free of buildings around Moscow are included in its body, and the additional greening of a territory of 38.6 thousand hectares in place of old demolished buildings within the city, along communication roads, and water reservoirs, as well as the creation of water control plantings and sanitary protection zones are anticipated.

The eighth session of the Moscow City Soviet adopted a resolution in which a complex of measures for the improvement of the city's environment and the establishment of optimum sanitary life norms are planned. Additional 125

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USSR

KRUPIN, V. D., Priroda, No 7, 1973, pp 115-116

enterprises are to be moved beyond the city's limits during the years of 1973-77. Eighty-eight circulating water supply systems will be provided for the transport, metallurgical, and food enterprises. The organization of a Moscow Interdepartmental Scientific-Technical Council with relation to problems of the protection of the environment and rational exploitation of natural resources is planned.

3/3

3

USSR

UDC 616.931.553

GLADKOVSKY, A. P., LEONTEV, A. I., MAKAROVA, T. A., ELASHINA, M. M., DNER, Z. S.,
 KRUPINA, A. P., and VITVNER, V. S., Leningrad Hospital named S. P. Botkin, and
 Chair of Infectious Diseases, First Leningrad Medical Institute named I. P.
 Pavlov, and Institute of Epidemiology and Microbiology named Pasteur

"Clinical Symptoms and Etiology of Botulism"

Moscow, Klinicheskaya Meditsina, Vol 43, No 9, Sep 70, pp 79-83

Abstract: From 1959 to 1967 the authors treated 14 cases of botulism, most of which were caused by eating marinated or salted mushrooms or home-canned fish. The incubation period ranged from 2 hours to 3 days. The disease was incorrectly diagnosed in all but one case, owing to unfamiliarity with the symptoms on the part of the first doctors to see the patients (botulism has for sometime been virtually eradicated in the USSR). The initial symptoms are characteristic and readily detectable. They include a combination of indications of gastrointestinal disorders (vomiting, nausea, constipation, abdominal pains), with symptoms of impaired vision (anisocoria, mydriasis, diplopia, blepharoptosis, nystagmus, etc.), impaired swallowing, speech, and respiration. Prompt injection of antibotulinus serum usually prevents further development of the symptoms and, combined with antibiotics and hormones plus cardiovascular agents, strychnine, physostigmine, and pilocarpine, brings about recovery within about a month.

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USSR

UDC 621.396.6.017.72(086.8)

BONEV, P. G., KRUPINA, R. P.

"A Device for Thermal Insulation of Radio Electronic Equipment"

USSR Author's Certificate No 254828, Filed 22 Dec 67, Published 9 Mar 70 (from
RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10V257 P)

Translation: This Author's Certificate introduces a device for thermal insulation of radio electronic equipment. The device contains a thermostatically controlled chamber. As a distinguishing feature of the patent, the effectiveness of the thermal insulation is improved by making the thermostatically controlled chamber in the form of two closed evacuated shells of glass located one inside the other and separated from one another by heat-insulating support discs. The electrical leads which hold the inner shell pass through these discs.

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USSR

UDC: 632.95

KHARCHENKO, V. G., KUPRANETS, N. M., POLIKARPOVA, N. V., KRUPINA, T. I., and KLIMENKO, S. K., Saratov Polytechnical Institute

"A Method for Preparing Tetrahydrothiochromyl or symm-Octahydrothioxanthanyl Chlorides"

USSR Author's Certificate No 255292, filed 19 Mar 68, published 8 Apr 70
(from RZh-Khimiya, No 22, 25 Nov 70, Abstract No 22 N674 P by G. V. Kuznetsova)

Translation: These substances, which can be used as physiologically active compounds, are obtained from the reaction of semi- or bicyclic 1,5-diketones with H_2S and HCl in an $AcOH$ medium. A solution of 13.4 g of 1-phenyl-3-(n-methoxyphenyl)-3-(2-cyclohexanonyl)-propanone-1 in 45 ml of glacial $AcOH$ is saturated with H_2S (1 hour) and then with a mixture of H_2S and HCl gas (3 hours) and H_2S (1 hour). 6 g (about 45%) of 2-phenyl-2-mercapto-4-(n-methoxyphenyl)-heptahydrothiochromene is filtered off from the reaction mass. The filtrate is diluted with 300 ml of dry ether, the sediment filtered off, washed with ether and benzene, producing 3.3 g (about 20%) hydrochloride of 2-phenyl-4-(n-methoxyphenyl)-5,6,7,8-tetrahydrothiochromyl chloride, $C_{22}H_{22}Cl_2OS$, melting

1/2

USSR

KHARCHENKO, V. G., et al., USSR Author's Certificate No 258292, filed 19 Mar 68, published 8 Apr 70 (from RZh-Khimiya, No 22, 25 Nov 70, Abstract No 22 N674 P by G. V. Kuznetsova)

point 111-4°; perchlorate of chloride, C₂₂H₁₇ClO₄S, melting point 169-71°. Symm-Octahydrothioxanthenyl chloride (I), C₂₂H₁₇ClS, is prepared from methylenedicyclohexanone under similar conditions, yield 50%, melting point 95-7° (chloroform-ether). The corresponding iodide, C₂₂H₁₇IS, is obtained from the action of 1.5% HI in ether on I, melting point 153.5-6°. 9-Benzyl-symm-octahydrothioxanthene is obtained from the reaction of I with PhCH₂MgCl, yield 41%, melting point 107-9°. The hydrochloride of 9-methyl-symm-octahydrothioxanthenyl chloride, C₂₃H₂₀Cl₂S, is obtained under these conditions from ethylenedicyclohexanone with a yield of 40%, melting point 155-6° (chloroform-ether). It is converted by the action of HI into the corresponding iodide, C₂₃H₁₉IS, melting point 143-5°.

2/2

- 91 -

KRUPINA, T. N.

Space
Physiology

So: SPAS 53440

6404571

ISSN 632-17-06:612-766.2

CHANGES IN CARDIAC ACTIVITY (HEART RATE, BLOOD PRESSURE, ETC.) DURING SPACE FLIGHT
Article by T. N. Krupina, B. K. Fedotkin, V. V. Gerasimovskaya, O. I. Borovskiy, V. S. Belyakov, N. N. Kozlov, A. V. Korobov, and V. A. Kabanov, Moscow, USSR, submitted for publication 1 June 1970

Abstract: This paper gives the results of clinical and experimental investigations of animals and human subjects conducted to study the mechanisms underlying the effect of hypokinesia on the cardiac function. Clinical investigations which involved a 10-day bedrest experiment indicated that lessened activity resulted in deterioration of the autonomic function and asynchronization of the body at later stages. Cardiac changes were traced in the ECG, largely due to a reduced amplitude of the T waves in the first standard and left chest leads. Hypokinetic experiments on rabbits revealed a drastic reduction in noradrenaline content in the hypothalamus at early stages and an inhibition of the adrenal function at later stages. Ultrastructural investigations of myocardial cells revealed focal changes in contractile elements (myofibrillar swelling), trophic formations (reduced number of cristae in mitochondria) and increased permeability of the capillary endothelium. Changes in ECG waves which are typical of hypokinetic exposure can be attributed to disturbances in cardiac regulation and trophic support of the myocardium.

Studies of the effect of hypokinesia on the human body have shown that a marked restriction of motor activity causes a number of shifts in cardiac activity and vascular tone, as well as reduced adaptability of the cardiovascular system and circulatory regulation apparatus (A. L. Rosenblat, et al.; V. V. Lakov; G. P. Mikheylovskiy and T. V. Benetovskaya; V. B. Georgiyevskiy and V. M. Mikheylov; L. I. Bakurin; A. V. Korobov, et al.; N. K. Panchenko, et al.; A. V. Beresovskiy, et al.; A. D. Vokhobovskiy, et al.; A. K. Denisov, et al.; A. R. Kabanovskiy; I. D. Pavlov, et al.; P. A. Borovskiy, et al.).

USSR

UDC: 621.375.5

~~KRUPITSKIY, E. I.~~, KARPOV, L. P., ZYUZIN, O. M., BLOK, A. S., Leningrad
Electrical Engineering Institute of Communications imeni Professor M. A.
Bonch-Bruyevich

"A Multichannel Optical Correlator"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztzy, Tovarnyye Znaki,
No 7, Mar 72, Author's Certificate No 329612, Division E, filed 29 May 70,
published 9 Feb 72, p 212

Translation: This Author's Certificate introduces: 1. A multichannel optical correlator with two-dimensional channels. The device contains a coherent light source, a collimator, a transparency carrying an image of the pattern to be recognized, a Fourier-transform lens, and a photocell matrix. As a distinguishing feature of the patent, in order to improve the accuracy of registration of correlation functions, a reflecting diffraction grating is placed in the rear focal plane of the lens, which performs Fourier transformation of the light flux passing through the transparency carrying a recording of the image to be processed, and a reference-mask matrix is placed together with the photocell matrix in the forward focal

1/2

USSR

KRUPITSKIY, E. I. et al., USSR Author's Certificate No 329612

plane of the lens. 2. A modification of this correlator distinguished by the fact that stray light beyond the photocell inputs is reduced by making the diffraction grating with an opening for filtering out the fixed component of the image being processed.

2/2

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USSR

UDC: 681.333:621.391

KRUPITSKIY, E. I., RIZKIN, A. A., BARBANEI', I. S., Leningrad Electrical Engineering Institute of Communications

"A Holographic Optical Correlator"

USSR Author's Certificate No 311282, filed 16 Mar 70, published 25 Oct 71
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 7,
Jul 72, Abstract No 7B474 P)

Translation: A number of devices are known which realize the principle of optical correlation by using a holographic mask. However, all known schemes use two lenses which realize direct and inverse Fourier transformation of the initial function, which procedure complicates the design and increases the overall dimensions of the device. The proposed holographic optical correlator acts as the main element of optico-electronic computing devices which realizes both elementary (addition, multiplication) and integral operations on complex functions given in the region of two variables. In the special case in which the functions operated upon are equal, the holographic optical correlator may be used as a matched optical filtration device for detecting and recognizing images. V. P.

1/1

1/2 041 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--MINIMIZATION OF THE ERROR FUNCTIONAL IN THE CLASS OF RELAY
FUNCTIONS AND ITS APPLICATION TO THE SYNTHESIS OF FM SIGNALS AND LINEAR
AUTHOR--(02)--KRUPITSKIY, E.I., SERGEYENKO, T.N.

COUNTRY OF INFO--USSR

SOURCE--RADIOTEKHNIKA I ELEKTRONIKA (RADIO AND ELECTRONICS), 1970, NO 2,
PP 252-256

DATE PUBLISHED-----70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., PHYSICS

TOPIC TAGS--ERROR MINIMIZATION, FREQUENCY MODULATION, SIGNAL ANALYSIS,
LINEAR ARRAY ANTENNA, ANTENNA RADIATION PATTERN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1864

STEP NO--UR/0109/T07000/00270252/0256

CIRC ACCESSION NO--AP0130691

UNCLASSIFIED

2/2 041

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PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0130691

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. A NEW APPROACH IS TAKEN TO THE SOLUTION OF THE PROBLEMS OF THE SYNTHESIS OF FM SIGNALS AND LINEAR ANTENNAS IN THE CLASS OF RELAY FUNCTIONS OF THE CURRENT DISTRIBUTION, WHICH MAKES IT POSSIBLE TO OBTAIN THE BEST POWER DENSITY APPROXIMATION TO THE GIVEN AUTOCORRELATION FUNCTIONS, GIVEN RADIATION PATTERN, AND OTHER FUNCTIONS OF INTEREST. THE METHOD REALIZATION IS DESIGNED FOR USE WITH A DIGITAL COMPUTER.

UNCLASSIFIED

USSR

UDC: 621.391.19

KRUPITSKIY, E. I., KARPOV, L. P., ZYUZIN, O. M., BLOK, A. S.

"Device for Formation of Characteristics During Recognition of Patterns"

USSR Author's Certificate Number 307411, filed 6/04/70, published 29/07/71, (translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 3, 1972, Abstract No 3 A379 P)

Translation: For formation of characteristics during recognition of patterns a device is suggested containing a source of coherent light, a collimator, a transparency with the pattern to be recognized, and a Fourier transform lens along the optical axis of the device. In order to increase the speed and reliability of recognition, an optical system to multiply the light flux-such as a matrix of a small-diameter lens and a converting lens-is placed between the collimator and transparency, while a matrix of masks and photoreceptors, based on the number of light fluxes multiplied, is placed in the output plane of the device. 1 figure.

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USSR

UDC: 681.325.65:621.383

KRUPITSKIY, E. I., KARPOV, L. P., ZYUZIN, O. M., Leningrad Electrical Engineering Institute of Communications imeni M. A. Bonch-Bruyevich

"An Electron-Optical Learning System"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 25, Soviet Patent No 278229, class 42, filed 31 Jan 69, published 5 Aug 70, p 135

Translation: This Author's Certificate introduces an electron-optical learning system for recognition of acoustic and radar signals. Two-dimensional moments of the "instantaneous amplitude spectrum" are taken as the input signal characteristics. The device contains an "instantaneous spectrum" shaper, a specialized electronic computer, and a control module. As a distinguishing feature of the patent, the system is simplified and operating effectiveness is improved by connecting to the output of the "instantaneous spectrum" shaper a device which generates light flux modulated by the "instantaneous spectrum" of the signal to be recognized. This light generator is coupled to a multiple-channel optical correlator with electrical outputs proportional to the two-dimensional moments of the instantaneous amplitude spectrum. These electrical outputs are connected to the electronic computer.

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USSR

UDC 543.42:666.1/2

YEVSTROP'YEV, K. S., KRUPKIN, YU. S., GALIMOV, D. T., TARLAKOV, YU. P., SHEVYAKOV, A. M.

"On the Structural Features of $R_2O - B_2O_2 - GeO_2$ System Glasses from IR and EPR Spectroscopic Data"

Minsk, Zhurnal Prikladnoy Spektroskopii (Journal of Applied Spectroscopy), Vol 13, No 4, Oct 70, pp 655-661

Abstract: A UR-10 spectrograph was used to take ir spectra in the range of 1600 to 400 cm^{-1} . The glass samples, made of chemically pure materials, were heated to 800°C and pressed into potassium bromide. A Co^{60} gamma source of 104r/hr was used to irradiate the samples for the EPR tests. The dose was 2×10^6 roentgens at room temperature. The spectra were recorded with an RE 1301 radiospectrometer at 300°K.

Ir spectra of sodium glass samples with varying content (10, 20, and 30 mole %) of alkali oxide and of lithium and potassium borogermanate glasses were taken. As the Na_2O content is increased,

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YEVSTROP'YEV, K. S., Zhurnal Prikladnoy Spektroskopii, Vol 13,
No 4, Oct 70, pp 655-661

the spectral curves become simpler and the principal absorption band of $\text{Ge} - \text{O} - \text{Ge}$ at 900 cm^{-1} progressively shifts in the long wave direction. This behavior holds also for Li_2O , Na_2O , and K_2O .

Introduction of boric anhydride into the sample greatly alters the nature of the spectra of alkali germanate glasses. The principal absorption band shifts toward the higher frequencies. The band at 1100 cm^{-1} attributed to BO_4 tetrahedra, increases in intensity. The deformation vibration band at 600 to 400 cm^{-1} decreases gradually and in borate glasses degenerates. The effect of the boric anhydride is the same for sodium, lithium, and potassium glasses.

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YEVSTROP'YEV, K. S., Zhurnal Prikladnoy Spektroskopii, Vol 13,
No 4, Oct 70, pp 655-661

The shifting of the absorption bands and changes in intensity with variation in the composition and content of the glasses is related to changes in lattice structures in the samples.

Epr spectra excited by gamma radiation were taken for the same samples, and similar analyses and interpretations are made as for the ir spectra. Variation in the signals and their intensities as a function of the quantity of B_2O_3 correlates well with the results of the ir spectra.

It is concluded that there is a range of compositions of alkali borogermanate glasses in which part of the germanium exists in sixfold coordination (in the form of GeO_6 octahedra). The range expands as the concentration of the alkali oxide increases. For 10, 20, and 30 mole % of Na_2O , the limiting concentration of B_2O_3 is 10, 25, and 30 to 40 mole %. In potassium and lithium glasses the maximum is 30 to 40 mole % of B_2O_3 .

Orig. article has 4 figures, 1 table, and 10 references.

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USSR

UDC 669.046.5

KRUPMAN, I. I., SOCHNEV, A. Ye., DETOCHKA, V. I., TELESOV, S. A.,
OFENGENDEN, A. M., and NESTEROVICH, R. P.

"Steel Refining in Ladle by Self-Fluxing (Exothermic) Slag Mixtures"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISIS), (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys).
Izd-vo "Metallurgiya," No 61, 1970, pp 244-246

Translation of abstract: Results are presented of an investigation of the burning rate of self-fluxing mixtures as a function of their thermal state and humidity of the lime used. A procedure is described for preliminary melting of such mixtures with liquid refining of slag in a ladle before casting. Data are presented on experimental heats with refining by self-fluxing mixtures for preliminary melting in a 140-ton ladle. Advantages in using such mixtures are as follows: the degree of desulfurization obtained with the addition of a 3% mixture is on the average 52%; the steel contamination with nonmetallic impurities is reduced; and its plastic properties are improved. 2 tables.

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AA0040707

Krupman, L.I.

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 3-70

235786 REFINED MOLTEN SLAG is ignited by a cartridge containing aluminium and magnesium together with nitre and ferrous oxides, in conjunction with a ni-chrome filament coil at the base which contacts the most flammable part of the slag mix. These cartridges are placed at the base of the ladle, and their ends led out for firing electrically at the correct moment. The cartridge ignites and with it the entire exothermic mix in the ladle. 100-150 kg mix burns in 5-8 minutes and gives refined slag at 1350-1450°C. Combustion products are exhausted clear of the shop. 23.11.66. as 1115027/22-3. KRUPMAN, L.I. et al. Donetsk Ferrous Metals Inst. (12.6.69.) Bul.6/24.1.69. Class 18b. Int.Cl. C21c.

19750341

AA0040707

AUTHORS: Krupman, L. I.; Sochnev, A. Ye.; and Patik, A. S.

Donetskiy Nauchno - Issledovatel'skiy Institut
Chernoy Metallurgii

19750342

1/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--FERROELECTRICS WITH ORIENTATIONAL MOBILITY OF AMMONIUM GROUPS M
PRIMEI NH SUB4 EX SUB4 TYPE COMPOUNDS -U-
AUTHOR-(03)-ALEKSANDROVA, I.P., ALEXANDROV, K.S., KRUPNAYA, I.P.
CCOUNTRY OF INFO--USSR
SOURCE--FIZ. TVERD. TELA 1970, 12(4), 1024-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--AMMONIUM COMPOUND, FERROELECTRICITY, PROTON
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3001/0366 STEP NO--UR/0181/70/012/004/1024/1029
CIRC ACCESSION NO--AP0126121
UNCLASSIFIED

2/2 014 UNCLASSIFIED PREPARED DATE: 10/19/71
 GIRC ACCESSION NO: 40124121
 ABSTRACT/EXTRACT--(U) QP-00- ABSTRACT. THE ORIENTATION MODULUS OF THE
 POLAR GROUPS OF THE FERRULES, AS AN INDICATOR OF THE
 INVESTIGATED IN A DRYED FIBER, FIBROUS, AND FOR POLYMER OF THE POLYMER
 REGION, FILLED OF WATER MOLE. IN THE 2 PHASES AND FILLED IN 1971, FOR
 INVESTIGATED CRYSTAL, AS WELL AS AMORPHOUS SOLIDS AND POLYMERIZATION
 IS A FERRULES, WITH A HIGH ORIENTATION MODULUS OF POLYMERIZATION
 UNDER THE LENSE POINT. THE ORIENTATION WAS CONSIDERED IN THE
 OF A FINE AVERAGE CONCENTRATION, REMOVED FROM THE DIFFERENTIAL
 WHICH RESULTS RELATIVE TO LARGER THAN 2 SYMMETRY DUE TO THE POLAR
 WATER MOLE, DO NOT CONTRIBUTE TO POLARIZATION. ORIENTATION, 1971.
 FILE, KASANDYAN, USSR.

UNCLASSIFIED

the boundary layer by three films after the plasma hit the metal obstacle was observed. Neutrals, forming by the interaction of the charged particles with the atoms of the obstacle and by elastic and nonelastic collisions with the particles in the boundary layer, become plasma's main component. The installation diagram and the graphs of plasma component densities versus distance from obstacle are presented.

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UDC: 681.325.65:621.383

USSR

KRUPITSKIY, E. I., KARPOV, L. P., ZYUZIN, O. M., Leningrad Electrical Engineering Institute of Communications imeni M. A. Bonch-Bruyevich

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Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 25, Soviet Patent No 278229, class 42, filed 31 Jan 69, published 5 Aug 70, p 135

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